E&MJ METAL AND MINERAL MARKETS

WEEKLY MARKET INFORMATION ISSUED BY THE PUBLISHERS OF ENGINEERING AND MINING JOURNAL

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THIS WEEK IN THE MARKETS...

- **Custom smelter copper available at prices ranging from 29½c. to 30c.**
- **British Ministry of Materials to buy Rhodesian copper at lower prices.**
- **Domestic producers advance lead one-half cent as London stages recovery.**

COPPER – Unsettled price situation.

The price situation in copper here and abroad remains extremely unsettled, with consumers unwilling to make any important commitments involving forward shipment metal. Custom smelter copper was available here during the week at prices ranging from 29½c. to 30c. per pound, delivered. The large mine operators held to 30c. Resale copper sold at concessions of 1c. and 1½c. per pound.

With the general trend in the direction of establishing a fair selling basis, few in the industry regard the Chilean price of 35½c. f.o.b. Chilean ports as anything more than an arbitrary price well apart from the regular established trading basis. The British Ministry of Materials last week broke away from its previous buying basis. Effective April 25, the British Government entered into an agreement with Commonwealth producers to cover its needs on the basis of the *E.&M.J.* domestic price.

With foreign copper available in volume at around 30c., our export or foreign copper quotation, beginning with April 23, no longer recognizes sales of Chilean metal at 36½c., delivered, in its daily weighted averages. In other words, a free market quotation, under prevailing circumstances, cannot include an unrealistic price fixed by a government.

LEAD – 12½c., N. Y. (f.a.s. Gulf 10¾.)

The London market for lead advanced £10 per long ton during the last week, which made buyers here rather eager to acquire even larger tonnages than in the preceding week and brought about an advance in the price of one-half cent a pound yesterday. This established the market at 12½c., New York, and 12.30c., St. Louis.

Demand was described as brisk and several sellers reported a "waiting list." Sales in the domestic market for the week totaled 15,904 tons, which compares with 9,801 tons in the preceding week.

Sentiment in the depressed European market appears to be improving. Prompt lead in London moved up from £73 per long ton a week ago to £83 yesterday.

U. S. Smelting Refining & Mining Co. announced last week that it is altering its operating schedule from the six-day week to five, beginning May 2.

Zinc–11c., East St. Louis (f.a.s. Gulf 9¼c.)

Though the London market staged a fair recovery during the last week, the rise in prices abroad so far was insufficient to bring about a change in the domestic quotation. Smelters held to 11c. on Prime Western, East St. Louis, throughout the week. Demand showed improvement in the galvanizing grade, with consumers taking on more May shipment metal.

W. J. During, of the Precision Castings Co., at the meeting of the American Zinc Institute, said if the price of zinc is raised to an uneconomic level, the zinc industry would be committing suicide. The die casting industry he said, would reduce the use of zinc 50 to 60% within a year, switching to aluminum and magnesium.

Prompt zinc in London closed yesterday at £68½ per long ton, which compares with £62¾ a week ago.

TIN – 95c., N.Y.

The London market steadied, partly on covering by shorts. This was reflected in a moderate recovery here. However, business continued inactive throughout the week. The market settled yesterday at 95c. per lb. on Straits tin, prompt delivery, after moving up to 96½c. on the preceding day.

The Bolivian authorities have started negotiations with the Patino and Hochschild interests in regard to the payments problem on the nationalized mines.

QUICKSILVER – $195@$197, N.Y.

The market was inactive, with business restricted almost entirely to small lots of spot or prompt metal. Scattered lots sold at prices ranging from $195@$197 per flask of 76-lb. Some Mexican metal might have been picked up at concessions.

SILVER – 85¼c., N. Y. (London 74d.)

The price situation was unchanged last week. World production is showing a tendency to diminish, whereas consumption continues at a good rate, according to Mocatta & Goldsmid, London silver merchants. Surplus stocks of Cuban and Japanese metal are being marketed in an orderly manner.

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aluminum

anodes for cathodic protection

babbitts

brazing and bronzes

die casting metals

lead and lead products

magnesium

nickel silver

plating anodes

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E&MJ METAL AND MINERAL MARKETS

WEEKLY MARKET INFORMATION ISSUED BY THE PUBLISHERS OF ENGINEERING AND MINING JOURNAL

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"Use Wanted" for Gallium

The "use wanted" sign is still out for gallium, the Alcoa Aluminum News-Letter reports. It is more than two years since the Aluminum Company of America, a major gallium producer, widely publicized gallium's properties, but only a few minor uses have been developed for this metal.

Gallium melts at about 86°F but doesn't boil until 3600°F or higher. Like water, it expands upon solidification. Its electrical resistivity variability is believed greater than that of any other metal. It emits electrons at extremely low temperatures. Chockfull of unique properties, gallium is truly one of the most unusual elements.

Exploiting the properties of gallium has been the problem. Some uses exist, but at more than $1,000 a pound, we can count on our fingers the pounds used each year. It appears in dental alloys for gold restoration work. A patent has been issued for minor use in selenium rectifiers. Gallium chloride is used experimentally as a catalyst for polymerization of vinyl ethers. Radioactive gallium has been used in the diagnosis and treatment of bone cancer. The most promising application, though quantitatively minor, is as a liquid seal on the inlet system of mass spectrometers, where its liquid range and low vapor pressure make it superior to mercury in analyzing hydrocarbons with high boiling points.

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Magnesium Plants to Close

The Government announced last week that it will close five of its six magnesium plants. The cutback in production, scheduled for June 30, resulted from a review of requirements by the Munitions Board.

Plants being closed are at Painesville, Ohio; Canaan, Conn.; Wingdale, N. Y.; Spokane, Wash.; and Manteca, Calif. The suspension of production will cut back the Government's output from about 196,000,000 lb. a year to 80,000,000 lb. The plants, operated for the Government under contract, were reopened in 1951 to meet defense needs.

The Government's largest plant, at Velasco, Texas, which produces the metal from seawater, will remain in production. This plant is being operated by the Dow Chemical Co.

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Magnesium Production

Production of primary magnesium ingot in February totaled 9,078 tons, which compares with 9,908 tons in January and 7,794 tons in February a year ago, the Magnesium Association reports.

Shipments of wrought magnesium products in February totaled 884 tons, against 807 tons in January and 874 tons in February a year ago.

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Primary Aluminum Stocks

Stocks of primary aluminum in the hands of domestic producers totaled 10,502 tons at the end of February, which compares with 9,336 tons a month previous, the Bureau of Mines reports.

Production in February was 92,649 tons and the quantity sold or used was 91,483 tons.

Imports of crude aluminum in January amounted to 19,497 tons, of which Canada supplied 18,134 tons, France 55 tons, Japan 742 tons, Norway 51 tons, West Germany 514 tons, and others 1 ton.

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Sulphur in January

Production of native sulphur in January totaled 418,568 long tons, which compares with 422,560 tons in December and 433,871 tons in January a year ago, according to the Bureau of Mines.

Apparent sales in January totaled 357,044 tons, against 407,548 tons in December and 420,089 tons in January a year ago.

Producers' stocks at the end of January totaled 3,130,379 tons, which compares with 2,851,214 tons on hand a year ago.

Recovered sulphur of a purity of 97% or more produced in January amounted to 28,239 tons, against 26,526 tons in December and 18,233 tons in January a year ago.

Felix E. Wormser Sworn In

Felix E. Wormser was sworn in April 24 as Assistant Secretary for Mineral Resources of the Department of the Interior at a White House ceremony, with President Eisenhower an interested witness.

Mr. Wormser will have supervision over the Bureau of Mines, the Geological Survey, Division of Geography, and the Division of Oil and Gas.

He was born in Santa Barbara, Calif., on Oct. 31, 1894. He received a degree in mining engineering from Columbia University in 1916. He is a veteran of World War I. For a time he was on the editorial staff of *Engineering and Mining Journal*. He was vice president of the Lead Industries Association, and later a vice president of the St. Joseph Lead Co.

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Zinc Institute Elects

Marshall L. Havey, of the New Jersey Zinc Co., was elected president of the American Zinc Institute at its annual meeting held in St. Louis, April 27. He succeeds Russel B. Caples who has held the office since 1951.

Three vice presidents elected are: W. H. Leverett, National Zinc Co., Inc.; George W. Potter, of Potter-Sims Mines, Inc.; Frank A. Wardlaw Jr., International Smelting & Refining Co.

Erle V. Daveler, of the American Zinc, Lead & Smelting Co., was reelected treasurer.

Ernest V. Gent continues as executive vice president and secretary.

The following directors were elected for the term ending 1956:

K. C. Brownell, American Smelting & Refining Co.; E. R. Dondorf, National Lead Co.; R. E. Dwyer, Anaconda Copper Mining Co.; Andrew Fletcher, St. Joseph Lead Co.; Elmer Isern, Eagle-Picher Co.; G. H. LeFevre, U. S. Smelting Refining & Mining Co.; W. H. Leverett, National Zinc Co., Inc.; E. H. Snyder, Combined Metals Reduction Co.; S. D. Strauss, American Smelting & Refining Co.; and Jean Vuillequez, The American Metal Co., Ltd.

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Receives Galvanizers Award

Ernest V. Gent, executive vice president of the American Zinc Institute, was the recipient on April 27 of the annual award of the Galvanizers Committee, which held its 29th meeting coincidentally with the annual convention of the zinc industry. He was presented with a bronze plaque suitably inscribed in recognition of his distinguished service to the galvanizing industry.

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President of Handy & Harman

Judson C. Travis has been elected president of Handy & Harman, refiners and fabricators of precious metals. Mr. Travis succeeds G. H. Niemeyer, who asked to be relieved after serving as the company's president for 15 years. Mr. Niemeyer will continue as director and chairman of the executive committee, and president of Handy & Harman of Canada, a subsidiary.

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Miscellaneous Metals

Quotations cover wholesale lots, f.o.b. New York, unless otherwise specified.

ALUMINUM—Per lb., base price, f.o.b. shipping point: 30 lb. ingot, 99% plus, 20½c., in pigs, 19½c.

Base prices on aluminum ingot of higher purity: 99.75%, 21c.; 99.8%, 21½.; 99.85,% 22½.; 99.9%, 23½c.

ANTIMONY — Cents per lb., 99½% grade:

	Domestic Boxed (a) New York	Domestic Bulk (b) Laredo
April 23	37.970	34.500
April 24	37.970	34.500
April 25	37.970	34.500
April 27	37.970	34.500
April 28	37.970	34.500
April 29	37.970	34.500

(a) Boxed (224 lb.), 10,000 lb. or more but less than carload. (b) In bulk, carload, f.o.b. Laredo; boxed one-half cent extra.

BISMUTH—Per lb., in ton lots, $2.25.

CADMIUM—Per lb., delivered.

	Commercial Sticks	Special (a) Shapes
April 23	$2.00	$2.15
April 24	2.00	2.15
April 25	2.00	2.15
April 27	2.00	2.15
April 28	2.00	2.15
April 29	2.00	2.15

(a) Special shapes to platers

CALCIUM—Per lb., in ton lots, cast in slabs and small pieces, $2.05.

CHROMIUM—Per lb., 97 percent grade, spot, $1.23, contract $1.18 per lb. (Usually sold as chrome-metal.)

Electrolytic chromium, 99% min., f.o.b. Niagara Falls, N. Y., per lb.: $3 to $4.50, depending on mesh.

COBALT—Per lb., rondelles or granules, in 500 to 600 lb. containers, $2.40; in 100 lb. containers, $2.42; less than 100 lb. containers, $2.47. Prices ex. docks or store N. Y. or Niagara Falls.

COLUMBIUM — No quotation. Pricing under prevailing conditions "subject to special terms."

GERMANIUM—Per lb., $340.

INDIUM—Per oz. troy, 99.9 percent pure, $2.25.

IRIDIUM—Per oz. troy, $175@$185.

LITHIUM — Per lb. 98%, $11@$14, depending on quantity.

MAGNESIUM—Per lb., f.o.b. producer's plant, ingots (4x6 in.) 99.8 percent, carload lots, 27c.; 100 lb. or more, l.c.l., 29c. Extruded sticks, carload lots, 35½c.

MANGANESE—Per lb., delivered, 96% Mn, carloads, bulk, 36.2 to 37.45c.; packed, 36.95 to 38.2c.

Electrolytic, per lb., f.o.b. Knoxville, Tenn., with freight allowed east of Mississippi: Min. 99.98% Mn: Carload, 30c.; ton lots, 32c.

MOLYBDENUM — Per lb., 99 percent $3.00.

NICKEL—Per lb., electrolytic cathodes, f.o.b. Port Colborne, Ont., contract price, 60c. U.S. import duty included. Nickel oxide sinter, 56¼c. per lb. of nickel content, f.o.b. Copper Cliff.

OSMIUM—Per oz., $200, nominal.

PALLADIUM—Per oz. troy, $24.

PLATINUM—Per oz. troy, $90 on wholesale lots; $93 on sales to consumers.

QUICKSILVER — Per flask of 76 lb., $195@$197.

RADIUM — Per mg. radium content, $16@$21.50, as to quantity.

RHODIUM — Per oz. troy, $125.

RUTHENIUM — Per oz. troy, $90@$93.

SELENIUM — Per lb. $4.25@$4.75 for black, powdered, 99.5 percent pure.

SILICON — Per lb., minimum, 97 percent Si, maximum 1 percent Fe, crushed, carload lots, in bulk, 18¼c.

SODIUM — Per lb., carload lots, in drums, 16½c.; less than carload lots, 17c.

TANTALUM — Per kilo, base price, $160.60 for rod; sheet, $143. Discounts on volume business.

TELLURIUM — Per lb., $1.75.

THALLIUM — Per lb., $12.50.

TITANIUM — Per lb., 99.3% plus, $5.

TUNGSTEN — Per lb., 98.8% minimum 1,000 lb. lots, $5.35. Hydrogen reduced, 99.9% plus $7.25.

ZIRCONIUM — Per lb., powder, $7.

Metallic Ores

Prices in tons of $2,000 lbs., or "units" of 20 lb., unless otherwise stated.

ANTIMONY ORE—Per unit of antimony contained, 50 to 55 percent, $2.40@$2.50; 55 to 60 percent $2.50@$2.60; 60 to 65 percent, $3.25@$3.35.

BERYLLIUM ORE—Per unit BeO contained, 10-12% f.o.b. mine, Colorado, $46@$48, depending on quantity.

Special domestic GSA price at depots in North Carolina, South Dakota, and New Hampshire for lots up to 25 tons per year, per short ton unit BeO: 8-8.9%, $40; 9.0-9.9%, $45; 10% or more, $50. Larger lots subject to negotiation.

Imported ore, per unit of BeO, c.i.f. U.S. ports, basis 10% $46; 11% $47; 12% $48.

CHROME ORE—Per long ton, dry basis, subject to penalties if guarantees are not met, f.o.b. cars N.Y., Phila., Balt., etc.

Rhodesian:
48% Cr_2O_3, 3 to 1 ratio
lump ..... (b) $44.00@$46.00
48% Cr_2O_3, 2.8 to 1 ratio. (b) $40.00@$42.00
48% Cr_2O_3, no ratio..... (b) $32.00@$34.00

South African (Transvaal):
48% Cr_2O_3, no ratio..... $34.00@$35.00
44% Cr_2O_3, no ratio..... $27.00@$28.00

Turkish:
48% Cr_2O_3, 3 to 1 ratio, lump.. (a) $55@$56

Indian (Baluchistan):
48% Cr_2O_3, 3 to 1 ratio..... $53@$54

Brazilian:
44% Cr_2O_3, 2.5 to 1 ratio, lump... (a) $32.00

(a) Nominal. (b) Long-term contracts.

COBALT ORE — Per lb. of cobalt con-

tained, $1.35@$1.45, f.o.b. Cobalt, Ont., depending on grade.

COLUMBIUM-TANTALUM ORE—Special DMPA domestic purchase price delivered f.o.b. depots in North Carolina, New Hampshire, and South Dakota, minimum Cb_2O_5-Ta_2O_5 in any ratio, per lb. acceptable material, $1.70 plus 100% bonus, equivalent to $3.40 per lb. of combined contained pentoxide in 50% ore.

IRON ORE—Per long ton, Lower Lake ports. Lake Superior ore:

Mesabi non-bessemer, 51½ percent iron, $9.70. Old Range, non-bessemer, $9.95.

Mesabi, bessemer, 51½ percent iron, $9.85. Old Range, bessemer, $10.10.

Eastern ores, cents per long ton unit, delivered at furnaces: Foundry and basic, 56@62%, 17c.

Swedish, 60@68% (contracts), per unit, 22c. plus, depending on grade, c.i.f. Atlantic ports.

Brazilian, 68 to 69% per unit, 25c., c.i.f. Atlantic ports. Nominal.

MOLYBDENUM ORE—Per lb. of contained MoS_2, 90% concentrate, 60c., f.o.b. mines.

MANGANESE ORE—Good quality ore for nearby delivery in demand at firm prices.

Indian ore was unchanged at $1.18@$1.21 per long ton unit of Mn, c.i.f. U.S. ports, duty extra, basis 46 to 48% Mn, nearby positions.

On long-term contracts for ore from West Africa and other sources, quotations nominal at 90 to 93c., c.i.f. U.S. ports, duty extra.

Chemical grades, per ton, coarse or fine, minimum 80 percent MnO_2, Brazilian or Cuban, carloads, in barrels $65@$75. Domestic 70 to 72 percent, $45@$50, f.o.b. mines.

TITANIUM ORE—Per gross ton, ilmenite, 59.5% TiO_2, f.o.b. Atlantic seaboard, $18@$20, nominal.

Rutile, per lb., minimum 94% concentrate, 6@6½c.

TUNGSTEN ORE—Per short ton unit of WO_3, concentrates of known good analysis, basis 60%.

Foreign ore: Nearby arrival, $41@$42 a short ton unit of WO_3, c.i.f. U.S., duty extra; forward delivery nominal in quiet market.

Western high grade scheelite concentrate, $63 per unit, f.o.b. mine.

North Carolina high grade concentrate, $65 per unit, f.o.b. mine.

London, per long ton unit of WO_3, buying prices: Wolfram 310s., scheelite 295s.@300s. Quotations nominal.

VANADIUM ORE—Per lb. V_2O_5 contained, domestic, 31c., f.o.b. mine.

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CHROME ORES

MANGANESE ORES

IRON ORES

ZIRCON ORE (sand)—Per long ton, c.i.f. Atlantic seaboard, minimum 65 percent ZrO_2, $42@$43.

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Feldspar Grinding Mill

Construction of new feldspar grinding facilities at Erwin, Tenn., was announced last week by the Industrial Minerals Division of the International Minerals & Chemical Corp.

A new mica mill has been put into production at Erwin to supply finely ground material for the rubber and paint industry. It will be operated by the Newdale Mica Co., a unit of the corporation's Consolidated Feldspar department.

Metallic Compounds

ARSENIOUS OXIDE (arsenic trioxide), refined, white, minimum 99 percent—Per lb., 5½c., in barrels carload lots delivered.

COBALT OXIDE—Ceramic grade 72½ to 73½% Co, $1.82 per lb. east of Mississippi, and $1.84½ per lb. west of Mississippi. Quotations are for oxide packed in 350-lb. containers.

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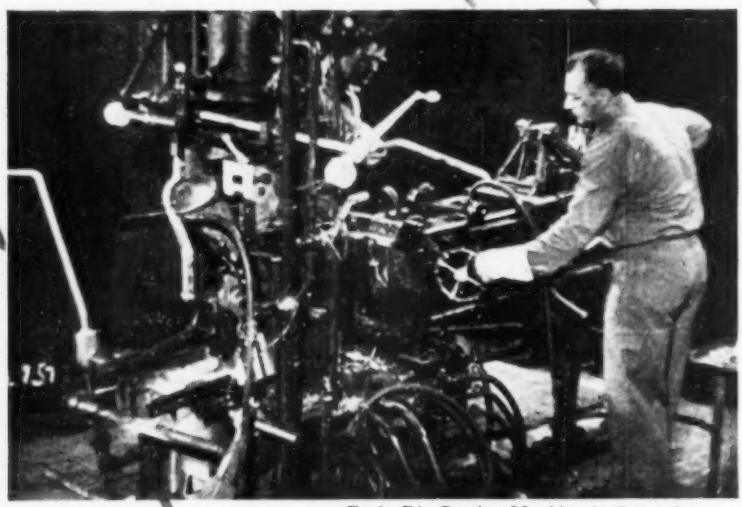

Early Die Casting Machine in Operation

The production of castings by pouring molten metal into sand molds is an ancient art. The jewelry industry's requirements for smoother castings with sharper outlines, resulted in the development of a process utilizing plaster molds. In either case, however, the removal of the cast part necessitated the destruction of the mold. The search for a permanent mold for the quantity production of repetitive parts bore fruit in the Middle Ages when manufacturers of pewterware developed molds made of iron. In the 1800's so-called tin soldiers were also gravity-cast from hinged iron molds.

The next logical step was to improve the accuracy of cast parts by forcing molten metal under pressure into strong steel molds, instead of merely relying on gravity. This eventually led to the development of the linotype machine by Ottmar Mergenthaler. The basic principle of the linotype machine — pumping metal into a permanent mold by means of a plunger submerged in liquid metal — was adapted and embodied in the first die casting machine at the start of the century, and the first commercial die castings, such as automotive bearings, were produced from tin and lead-base alloys.

When early die casting experimenters — called upon for castings with better mechanical properties — turned to zinc as a base metal, little did they realize that zinc base die castings would finally advance to a point where they became a vital factor in modern engineering processing. Least of all would these pioneer die casters have foreseen that in a relatively short span of years their infant-industry would be outranked only by the galvanizing industry as the country's largest consumer of zinc.

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VITAL STATISTICS OF PRINCIPAL METALS

	Mar. 1953	*Feb. 1953*	*Jan. 1953*	*Year Ago (d)*	*% Change Latest Mo. and Year Ago*	*1952 Average*
COPPER						
Avg. price per lb., electro(a)	29.289	24.968	24.200	24.200	+21	24.200
Production: Dom. ref., tons	112,016	101,538	108,010	94,563	+18	99,093
Dom. crude prim	82,213	75,172*e*	77,783	83,389	−1	80,157
Shipments to fabricators	133,462	117,204	125,133	112,719	+18	120,480
Stocks at end, ref. dom	55,807	60,944	59,836	58,487	−5	.....
Fabricators' Shipments	122,980	123,850	136,647	116,887	+5	115,787
Stocks at end	319,356	312,177	321,212	254,868	+25	.....
Imports: Blst. & ref.	.....	49,642	40,494	26,598	+87	42,429
In ore etc.	.....	13,405	4,328	10,494	+28	8,766
Exports: Refined	.....	4,402	6,570	11,077	−60	14,511
LEAD						
Avg. price per lb., N. Y.	13.404	13.500	14.192	19.000	−29	16.467
Production, tons (b)	47,993	45,423	47,295	48,943	−2	44,398
Shipments, dom.	44,361	38,811	37,678	39,161	+13	42,408
Stock at end, dom.	62,371	58,949	52,760	41,040	+52	.....
Dom. mine prod., metal cont.	.....	29,297	30,839*e*	34,339	−15	32,008
Imports, refined	.....	40,160	46,313	23,297	+73	42,560
ZINC						
Avg. Price per lb., St. L. p.w.	11.029	11.483	12.588	19.500	−43	16.215
Production, refined, tons	83,485	76,899	81,994	85,028	−2	80,119
Shipments, refined (c)	77,285	71,710	80,679	85,575	−10	74,681
Stocks at end, dom. ref.	99,864	93,664	88,475	26,004	+284	.....
Dom. mine prod., metal cont.	.....	48,850	53,731*e*	58,948	−17	55,085
Imports: Ref. metal	.....	18,471	20,833	5,179	+257	9,596
In ore	.....	29,541	46,017	36,062	−18	37,500
ALUMINUM						
Avg. price, per lb., ingot	20.500	20.500	20.173	19.000	+8	19.410
Production, tons	.....	92,649	89,890	72,374	+28	78,111
Shipments, dom. met.	.....	91,483	87,833	73,017	+25	78,182
Stocks at end, dom. met.	.....	10,502	9,336	9,547	+10	.....
Imports, crude metal	.....	.....	19,497	11,824	+65	10,647
TIN						
Avg. price per lb., N.Y., Straits	121.442	121.500	121.500	121.500	0	120.473
Production, Longhorn, long tons	.....	.....	*Dec.* 3,705	1,805	+105	1,883
Stocks at end, RFC & cons.	.....	.....	" 61,413	39,975	+54	.....
Imports, metal	.....	.....	" 7,180	1,591	+351	6,687
Imports, in ore	.....	.....	" 3,277	1,819	+80	2,208

(a) F.O.B. refineries, Atlantic seaboard. For average New England delivered price, add 0.300c.
(b) By primary domestic refineries.
(c) Includes export drawback and Gov't account.
(d) The month of the previous year corresponding to the latest month shown on the same line.
(e) Revised.

Sources: Copper production, shipments and stocks—Copper Institute. Lead production, shipments and stocks—American Bureau of Metal Statistics. Slab zinc—American Zinc Institute. Aluminum—U.S. Bureau of Mines. Tin—Department of Commerce and Bureau of Mines.

Zinc Output to Decline; Flexible Tariff Will Bring Price Complications, Strauss Says

High government estimates on probable civilian and military needs are primarily responsible for the slump in the price of zinc, Simon D. Strauss, vice president of the American Smelting & Refining Co., told members of the American Zinc Institute on April 27. He looks for production of zinc ore and metal to be lower in 1953 than in 1952. Mr. Strauss, in a review of the world situation in zinc, opposed the proposed sliding-scale import duty on lead and zinc.

"The extent of curtailment in output is as yet relatively modest, considering the marked reduction in price that has occurred since the last meeting of the Institute," Mr. Strauss said, "and once again we have dramatic evidence that after the forces of expansion of supply have been set in motion it is difficult to reverse the trend.

"Two years ago the governments of the Free World were pushing for rearmament on a vast scale; they looked to the zinc industry for substantially greater output of a vital raw material. It was said that the demand for zinc was insatiable and that shortages would persist through 1954 and probably into 1955, even if production was stepped up by adding new capacity.

"The war in Korea has continued; the rearmament effort has persisted, although perhaps on not quite so great a scale as planned two years ago; in the United States industrial activity continues at near-record levels.

"In the face of all this the zinc producing industry is in the midst of a slump comparable in severity to and somewhat more protracted in duration than the slump of 1949 and early 1950.

"How has this happened? Did the zinc industry respond too fully to the emergency calls of our government? That hardly seems a valid explanation. After all, production of zinc metal in 1952 was only 10% above that of 1950 and barely 4% above that of 1951. The U. S. government's program in 1951 envisioned an expansion of 20 to 25% in world output and, in fact, plans for such expansion were made and are being carried out. Smelter production in 1953 will be about 2% below 1952 but capacity is now sufficient so that it could have been 5% higher than 1952 and 15% above 1950.

"The difficulties of the zinc industry today are not caused by its having done more in expanding output than it was asked to do; they are caused by forecasts of future civilian and military demand that proved far wide of the mark. Shortages in late 1950 and early 1951 were not the result so much of actual consumption of zinc as of fears whipped up by repeated government estimates of huge requirements that have not materialized.

Wartime Estimates High

"Government wartime estimates of demand for metals will never err on the low side because they are loaded with safety factors which the military must necessarily include. Industrial consumers, as well as producers, will do well to remember this, the next time that Washington raises the specter of continuing shortages.

"I estimate mine output will fall short of smelter consumption of mine product by a small margin. As we all know, the drop in prices bears more heavily on the mine than on the smelter —in fact, the latter has every incentive to maintain full production so long as the concentrate supply holds up; capacity operation means lower unit costs.

"Obviously, in making this forecast, I am assuming no early change in the present market situation for zinc metal — namely, well-sustained demand in the United States as contrasted with below-average demand in Europe. Unfortunately, it is hard to forecast an early improvement in European demands, although in the long run a settlement of the Korean War would be most helpful in restoring more normal trade relations in Europe.

"Whether the diminishing concentrate supply will force a significant cut in metal output by the end of the year (beyond the modest drop already estimated) is open to question. However, by the end of the first quarter of 1954, if present low prices continue, the rate of metal production should be significantly lower."

Opposes Sliding Scale Duty

In opposing the sliding scale import duty on zinc, Mr. Strauss said, in part:

"The statistics clearly show that the brunt of curtailment has fallen most heavily on the mines in the United States; that, in turn, reflects the fact that our mines on the whole have higher average costs of production than most foreign mines. Under the circumstances it is hardly surprising that domestic producers should seek protection from foreign competition, culminating in the introduction of proposals for a sliding-scale import duty before the current session of Congress.

"On careful analysis I believe the cure to be worse than the disease. Please bear with me while I explain my reasons for making this statement. Based on the present price of 11¢ a pound for zinc, the duty on imports of zinc metal would be 6.20¢ a pound and the duty on imports of zinc in concentrates would be 3.90¢ a pound.

"The price of zinc would reverse its direction each three months; the rate of duty would not be the same for more than three months at a time unless the foreign market rose and remained above 14.5¢ a pound. But the existence of this sliding-scale duty would maintain pressure on the foreign market to such an extent that improvement abroad would be slow to develop.

"The jig-saw pattern of price will be particularly harmful in regard to those markets in which zinc is directly competitive with other metals. I specifically have in mind the market for die-cast metal. The die-casters already complain that the zinc price is unstable, whereas the aluminum price is relatively stable. What will they have to say when the duty on zinc changes each quarter forcing, in its wake, a wide swing in the price?

World Mine and Smelter Production of Zinc(a)

(In Thousands of Short Tons)

	1947		1948		1949		1950		1951		1952		EST. 1953	
	MINE	SMELT.	MINE	SMELT.	MINE	SMELT.	MINE	SMELT.	MINE	SMELT.	MINE	SMELT.	MINE	SMELT.
United States	638	802	630	788	593	815	623	843	681	886	662	908	520	850
Other No. America	417	231	427	252	470	264	502	258	537	277	586	284	566	292
South America	84	4	90	3	99	4	116	9	144	10	164	15	175	24
Europe	200	400	224	475	274	554	300	654	337	701	366	704	372	681
Africa	73	24	101	25	123	26	145	25	158	25	170	26	199	44
Australia	160	78	167	92	169	91	186	95	180	86	188	98	200	98
Asia	28	17	33	24	44	36	49	54	60	62	82	77	80	75
Totals	1600	1556	1672	1659	1772	1790	1921	1938	2097	2047	2218	2112	2112	2064
Plus adjustment(b)		144		131		93		133		133		117		125
Plus adjustment(c)	22		35		72		101		80		78		70	
Minus adjustment(d)	20		40		38		36		22		20		20	
Adjusted Totals	1602	1700	1667	1790	1806	1883	1986	2071	2155	2180	2276	2229	2162	2189

(a)—Compiled by American Smelting & Refining Co.

(b)—Zinc content of zinc oxide, lithopone, zinc sulphate and zinc coatings produced from ores and concentrates corrected to a recoverable basis by assuming a 90% recovery factor. The bulk of this consumption of ores and concentrates by other than zinc smelters occurs in the United States.

(c)—Production at primary smelters from secondary materials.

(d)—Recoverable content of ores and concentrates exported by certain countries to countries of destination not included in this tabulation.

Note:—Mine production is on a recoverable basis. In certain cases, it has been necessary to take available statistics and estimate the probable recoverable content. Smelter production excludes secondary zinc wherever possible and it is believed that any inclusions are negligible.

"If the domestic mining industry were capable of supplying all the needs of domestic consumers, the attempt to retreat behind this Chinese wall of high tariffs might well prove feasible. But in the period since the end of World War II – which is now over seven years – domestic mine production of zinc has consistently been less than 70% of U. S. consumption of primary zinc. During this period the price of zinc has been erratic but for the most part it has been high in relation to pre-war levels. In fact, zinc has done better than the average of wholesale commodity prices of the Bureau of Labor Statistics.

"A strong domestic mining industry is a major asset to this country in time of war. But in time of war, as was demonstrated during World War II, we can count on the zinc supply of Canada and Mexico. Normally 80% of this country's imports of zinc as concentrates and as metal come from these two neighbors. They come in by rail and not by water. In attempting to assist our own industry at the expense of these two normal sources of zinc supply, we may be in the position of the dog who jumped off the bridge to get the bone he saw in the water – and thereby lost the bone he was carrying in his mouth."

•

Antimony Imports Rose Sharply in February

Total imports of antimony in February amounted to 1,346 tons, which compares with 713 tons in January and a monthly average for 1952 of 1,072 tons. Of the total imported during February, 1,121 tons was contained in ore, 166 tons was metal, and 59 tons in oxide.

Smelter production of primary antimony totaled 295 tons in February, against 870 tons in January, and an average of 988 tons a month for all of 1952. There was no U. S. mine output in February.

Industrial consumption decreased from the 1,222 tons in January to 1,049 tons in February. Of the total consumption, 51% was used in the manufacture of nonmetal products and 49% in the manufacture of metal products.

Stocks held by producers and smelters on February 28 remained virtually unchanged at 3,130 tons, compared with 3,065 tons reported on hand at the beginning of the month. Stocks held by industrial consumers and dealers on Feb. 28 decreased 8% from the 3,928 tons reported on hand Feb. 1, totaling 3,601 short tons.

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Refractories

CHROME BRICK – Per ton f.o.b. shipping point: Chemically bonded $77@$82; burned, $73@$78.

FIRECLAY BRICK – Per M., super quality, $116.60, Missouri, Kentucky, Pennsylvania; high heat quality, $94.60. Ohio, intermediate grade, $88; second quality, $79.20.

MAGNESITE – Brick, per ton f.o.b. works, 9-in. straights, $104.

Alloys

FERROCHROMIUM – Per lb. of Cr: High carbon (4-9% C) 65-69% Cr, lump, carloads, f.o.b. destination continental U.S.A., 24½c.; low carbon, 34½c.

FERROCOLUMBIUM – Per lb. of Cb contained, 50-55%, $4.90.

FERROMANGANESE – Per gross ton, 78-82% Mn, $225 f.o.b. shipping point, seaboard.

FERROMOLYBDENUM, Etc. – Per lb. of Mo contained, f.o.b. shipping point: Ferromolybdenum, 55-65% Mo, powdered, $1.41, all other sizes $1.32; calcium molybdate (CaO MoO_3), $1.15; molybdic trioxide (MoO_3), bagged, $1.13, canned, $1.14.

FERROPHOSPHORUS – Per gross ton, 23-25% P, carloads f.o.b. Siglo, Mt. Pleasant, Tenn., $65. Unitage of $3 for each 1% of P above or below the 24% base.

FERROSILICON – Per lb. of contained Si, destination continental U.S.A.: 50% grade, 12.40c.; 75% grade 14.30c.; 90% grade, 17c.

FERROTITANIUM LOW-CARBON – Per lb. of Ti contained: 25%, 0.10% C, $1.50; 40%, 0.10% C, $1.35, f.o.b. destination east of Mississippi River.

FERROTUNGSTEN – Per lb. of W contained, 75-85% W, $4.35.

FERROVANADIUM – Per lb. of V contained: Open hearth, $3.00; crucible, $3.10; low-carbon and silicon, $3.20. Contract prices.

SILICOMANGANESE – Per lb. carload lots, f.o.b. shipping point, freight allowed: 65-68% Mn, max 1½% C, 18-20% Si 11.4c.; max. 2% C, 15-17½% Si, 11.2c.; max. 3% C, 12-14½% Si, 10.9c.

SPIEGELEISEN – Per gross ton, 19-21% grade, $85, Palmerton, Pa.

ZIRCONIUM ALLOY – 12-15% Zr, 39-43% Si, 7c per lb., bulk, carload lots; 35-40% Zr, 47-52% Si, 20.25c. per lb.

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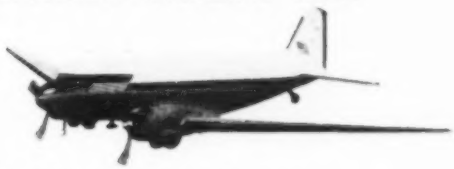

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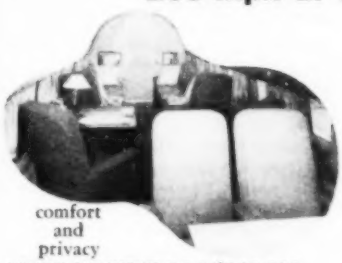

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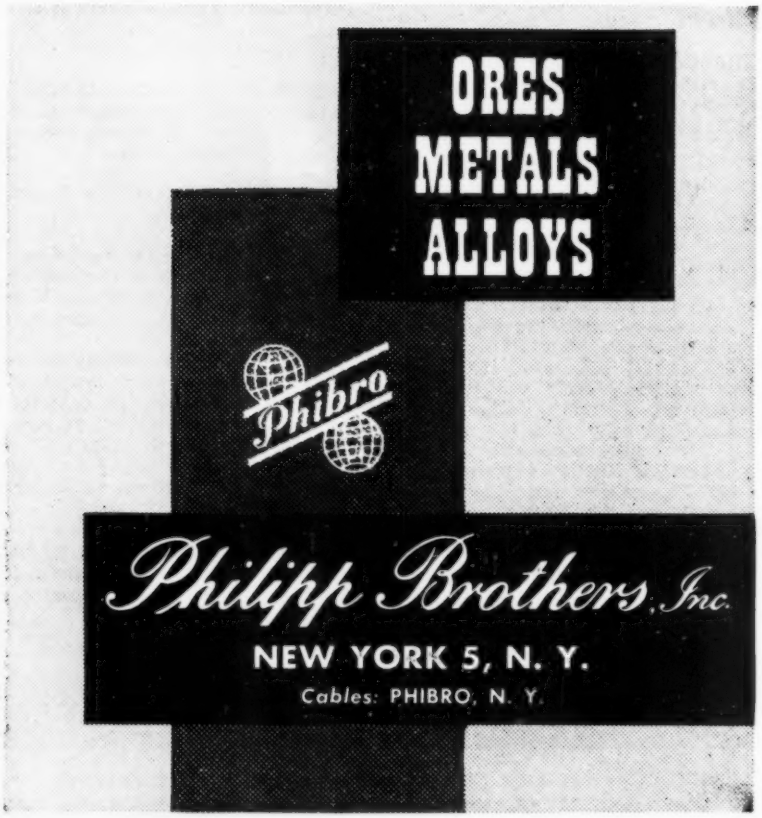

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From Company Reports

Anaconda Copper Mining Co.

Copper production from domestic and foreign mines owned by Anaconda Copper Mining Co. and its subsidiaries, together with copper produced from material purchased or treated for customers, amounted to 840,055,372 lb. in 1952, a decrease of 1.6% from 1951. Output from the mines owned by the company amounted to 628,989,789 lb., a slight increase over 1951, despite a series of strikes that resulted in a loss in production of about 43-million pounds of copper from its Chilean operations. Included in the year's output was the first copper from the Greater Butte project, and the new sulphide plant of Chile Exploration.

Ore production from the Kelley mine of Greater Butte commenced in April, 1952. By the year-end the rate of production was about 7,000 tons of ore a day. By mid-1953, ore production from the Kelley mine is expected to reach 12,000 tons a day and will be increased as rapidly as possible thereafter to the capacity output of 15,000 tons a day.

Zinc mine operations in the Butte district showed a slight decrease in production in 1952. Construction of a sixth electrolytic zinc unit at Anaconda, started in 1951, was practically completed at the close of last year.

Chile Exploration produced 350,902,772 lb. of copper in 1952, a decrease of 2.7% from 1951.

Andes Copper produced 103,129,010 lb. of copper in 1952, an increase of 13.8% over 1951.

Cananea Consolidated, a subsidiary of Greene Cananea, operating in Mexico, produced 61,169,789 lb. of copper in 1952, compared with 65,931,875 lb. in 1951. Cananea Consolidated purchased a 25% stock interest in Cobre de Mexico, the only copper refinery in Mexico.

Following is a summary of the output of the principal products of Anaconda Copper Mining Co. for the last two years:

	1951	1952
Copper, lb.:		
Total	853,619,718	840,055,372
From toll	210,238,156	189,472,478
Purchased materials	19,925,547	21,593,105
Company mines	623,456,015	628,989,789
In byproducts sold	4,117,114	3,834,252
Finished copper	849,502,604	836,221,120
Zinc, lb.:		
Total	439,918,058	455,946,862
From toll	207,320,783	237,974,758
Purchased materials	102,157,029	96,958,493
Company mines	130,440,246	121,013,611
In byproducts sold	22,953,339	25,986,979
Company plants	416,964,719	429,959,883
Lead, lb.:		
Total	104,157,854	122,546,388
Purchased materials	60,435,814	76,471,280
Company mines	43,722,040	46,075,108
In byproducts sold	716,700	433,445
Produced as metal	103,441,154	122,112,943
Silver, total, oz.	10,891,845	12,642,615
Gold, total, oz.	84,552	82,232
Manganese, long tons:		
Nodules (a)	83,295	80,906
Ferromanganese	36,616	39,923
Arsenic, tons	2,449	1,459
Cadmium, lb.	1,403,096	1,548,100
Treble-superphosphate and phosphoric acid tons	105,780	101,199
Lumber, ft.	90,506,482	89,063,415

(a) Includes nodules used in production of ferromanganese.

Vanadium Corporation

Major operations of the Vanadium Corporation of America are being maintained at virtual capacity and additional producing facilities are scheduled to be placed in operation in the months ahead, William C. Keeley, president, told stockholders.

Field construction of facilities for producing very-low-carbon ferrochromium at the company's plant at Graham, W. Va., is about three-quarters completed, and production should be started by midsummer. Present plans contemplate for the third quarter the beginning of operation of the third furnace at the new Cambridge, Ohio, plant.

The newly installed roaster for processing vanadium-uranium ore at the company's plant at Durango, Col., began operation in March. Both this and the Naturita, Col., mill are operating at capacity. Construction of a concentrating mill at the Southern Rhodesia chromium properties was started in March.

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Schultz Die Casting Co.

James Gerity Jr., president of Gerity-Michigan Corp., has been elected a member of the board of Schultz Die Casting Co., Toledo, Ohio. He is one of the founders of the die casting company.

Heavy-duty cables undergoing cyclic-load testing at Anaconda Wire & Cable Company's Research Laboratory, Hastings-on-Hudson, New York. At left is a partial view of the giant tensile testing machine, over 3 stories high, which is capable of testing long samples at loads up to 200,000 pounds.

here's where Anaconda plays "BEAT THE *Clock*"

Years are compressed into minutes in the Cyclic Aging Laboratory of Anaconda's subsidiary, Anaconda Wire & Cable Company, at Hastings-on-Hudson, N. Y. Here, through rigorous 24-hour testing cycles simulating actual conditions but decidedly more severe, high-voltage insulated cable is tested for long life, stability, and other desirable characteristics.

By such tests, Anaconda beats not only the clock, but the calendar. Vital engineering data, essential in the evaluation of cable design, which would ordinarily take from 20 to 50 years of in-use operation to acquire, is now available in a year or two, or less.

This research geared to the future is no isolated "for instance." Rather is it typical of Anaconda's continuing policy of planning for tomorrow . . . a policy unmistakably expressed in Anaconda's company-wide program of expansion and improvement now being carried on at mines, mills and fabricating plants. This multi-million-dollar program is based on the premise that as the nation's need for metals and metal products continues to expand, so should Anaconda's ability to produce them.

53273-B

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Otto Herres Supports Lead-Zinc Sliding Scale Tariff

The recent statement of the American Metal Co. attacking the proposed sliding scale lead-zinc tariff was deprecated by Otto Herres, vice president of the Combined Metals Reduction Co., and chairman of the National Lead and Zinc Committee of Western States Council. Mr. Herres said the statement "sharply denounced the efforts of American lead and zinc miners to protect themselves from being priced out of existence by the dumping of foreign metals on the markets of this country."

He said that as a consequence of the great price decline of lead and zinc following the large increase of imports of these metals "many mines have been forced to close down or curtail operations and others are still holding on at a loss hoping for relief through constructive legislation in the form of a sliding scale import tax. Such relief is proposed in the Simpson bill, H.R. 4294, the Dawson bill and others which have been introduced in both houses of Congress. The lead and zinc section of the Simpson bill recognizes the need to maintain a sound and active lead and zinc industry within the U.S. in order to supply the industrial, military and naval needs of the country. Dependence upon foreign sources for these metals is costly and dangerous to national security."

Mr. Herres pointed out that the American Metal Co. has mining interests in Mexico, South America and Africa and that its only mining interest in the U.S. is a potash property in New Mexico. He cited statistics to show the effect of low-priced lead and zinc on mining. In New Mexico, he said, the recoverable production in March, 1952, was at an annual rate of 6,840 tons of lead and 58,560 tons of zinc. This is reduced now to an annual rate of 540 tons of lead and 9,060 tons of zinc. The properties, he said, are not operated by marginal companies but include Kennecott, New Jersey Zinc, American Smelting & Refining, Peru Mining, and U.S. Smelting Refining & Mining Co.

He pointed out that in 1952 consumption of zinc for metal uses and for pigments was estimated at about 945,000 tons and that U.S. mine production was at an annual rate of 720,000 tons during the first six months, indicating a need for about 225,000 tons from outside sources. But about 565,000 tons was imported and therefore the price dropped by 43½%. He said lead was affected adversely in a similar manner, with high 1952 imports resulting in closed domestic mines and unemployment.

Mr. Herres stated that "The cost to the consuming industry of lead and zinc from the sliding scale tax is stated in excessive terms by American Metal, Ltd., possibly to scare the consumer." He also stated that the dollar short nations would gain more by selling us 300,000 tons of zinc in a stabilized market than by dumping 400,000 tons at distress prices and destroying 100,000 tons of domestic mining.

E&MJ QUOTATIONS

Daily Prices of Metals

Apr.	ELECTROLYTIC COPPER Domestic Refinery	ELECTROLYTIC COPPER Export Refinery	TIN Straits New York	TIN 99% (a) New York	LEAD New York	LEAD St. Louis	ZINC East St. Louis
23	29.675	31.400	92.000	91.000	12.000	11.800	11.000
24	29.675	32.325	94.000	93.000	12.000	11.800	11.000
25	No Market	30.200	94.000	93.000	12.000	11.800	11.000
27	29.700	30.350	94.000	93.000	12.000	11.800	11.000
28	29.675	30.175	96.500	95.500	12.000	11.800	11.000
29	29.675	30.175	95.000	94.000	12.500	12.300	11.000
Averages	29.680	30.771	94.250	93.250	12.083	11.883	11.000

(a) Nominal Quotation for tin content.

Average prices for calendar week ended April 25 are: Domestic copper f.o.b. refinery, 29.700c.; export copper f.o.b. refinery, 32.250c.; Straits tin, 93,833c.; New York lead, 12.000c.; St. Louis lead, 11.800c.; St. Louis zinc, 11.000c.; and silver, 85.250c.

The above quotations are our appraisal of the major United States markets, based on sales reported by producers and their agencies. They represent payments received by producers for the product. They are reduced to the basis of cash, New York or St. Louis, as noted. Prices in cents per pound.

Copper, lead and zinc quotations are based on sales for both prompt and future deliveries; tin quotations are for prompt delivery only.

In the trade, domestic copper prices are quoted on a delivered basis; that is, delivered at consumers' plants. As delivery charges vary with the destination, the figures shown above are net prices at refineries on the Atlantic seaboard. Delivered prices in New England average 0.300c. per pound above refinery basis.

Our export quotation for copper reflects prices obtaining in the open market and is based on sales in the foreign market reduced to the f.o.b. refinery equivalent, Atlantic seaboard. On f.a.s. transactions we deduct 0.075c. for lighterage, etc., to arrive at the f.o.b. refinery quotation.

Quotations for copper are for ordinary forms of wirebars and ingot bars. The premiums on special shapes, effective in most instances on deliveries beginning Jan. 1, 1951, are: Standard ingots 0.125c. per pound; slabs, 0.375c. and up, cakes 0.425c. and up, depending on weight and dimensions; billets 1.35c. and up, depending on dimensions and quality. Discount on cathodes 0.125c. to 0.15c. per pound.

Quotations for zinc reflect sales of the Prime Western grade as well as sales of other grades when sold on a Prime Western basis. Premiums obtaining over Prime Western zinc in the East St. Louis market on the following grades, in cents per pound: Selected 0.10c.; Brass Special, 0.25c.; Intermediate 0.5c. High Grade zinc sold on contract, delivered to the consumers' plant, commands a premium of 1.35c. per pound over the East St. Louis basis for Prime Western; on Special High Grade the premium or differential is 1.50c. per pound, effective Jan. 1, 1951.

Quotations for lead are for the common grade, and are based on sales of domestically refined metal sold to domestic consumers. The differential on sales in the Chicago district is 15 points under New York; for New England add 7½ points to the New York basis. Corroding grade commands a premium over common lead of 10 points.

Note: The daily quotations for copper, lead and zinc are weighted averages of sales reported to E&MJ; weekly averages are arithmetical averages of the daily quotations; monthly averages are the arithmetical averages of the daily quotations.

Silver, Gold, and Sterling Exchange

Apr.	Sterling Exchange "Checks"	Silver New York	Silver London	Gold London
23	281.7500	85.250	74.000d	248s.
24	281.8125	85.250	74.000d	248s.
25	Not Quoted			
27	281.8750	85.250	74.000d.	248s.
28	281.7500	85.250	74.000d.	248s.
29	281.8125	85.250	74.000d.	248s.
Averages	281.800	85.250	....	....

The daily New York silver quotation reported by Handy & Harman is for silver contained in ores and other unrefined silver-bearing materials, in cents and fractions of a cent per troy ounce. It is determined by Handy & Harman on the basis of actual sales of bar silver .999 fine in amounts of 50,000 ounces or more for nearby delivery at New York as reported daily by regular suppliers, and is usually one quarter cent below the price paid for such bar silver, this reduction being allowance to such suppliers for carrying, delivering, and marketing. In addition to foreign silver, the quotation also applies to domestic silver if such silver enters the New York market.

The Treasury's purchase price of newly mined domestic silver was established at 90.5c. per troy ounce, 1000 fine, effective on July 1, 1946 under an amendment to the Silver Purchase Act of July 6, 1939.

London silver quotations are in pence per troy ounce, basis .999 fine.

London gold quotations are per troy ounce, basis 1000 fine.

Sterling quotations, in cents, represent the demand market in the forenoon.

THIS WEEK'S BUSINESS INDICATORS

	Latest Week	Preceding Week	Month Ago	Year Ago	Net Change in Year
Steel Rate (% of capacity in operation)	100.3	(a) 101.0	97.1	52.1	.....
Steel Ingot Production, thousands of tons	2,262	(a) 2,276	2,190	1,083	+1,179
Automobile Production (cars and trucks)	195,477	(a) 162,171	181,749	134,141	+61,336
Electric Power Output (millions kwh.)	8,113	8,001	8,078	7,104	+1,009
Engr'g Const. Awards, 4-week daily av., in thousands (c)	$47,134	$45,839	$52,851	$46,620	+$514
Federal Reserve Index of Industrial Production	(d) 242 Apr.	.....	(a) 242	216	−26
E&MJ Index of Nonferrous Metal Prices (b)	184.44 Mar.	.....	172.29	195.10	−10.66
All Commodities, Bureau of Labor Statistics (e)	(d) 109.8 Apr.	.....	109.9	111.8	−2.0

(a) Revised. (b) 100 is composite of 1922-3-4. (c) From Eng. News-Record. (d) Preliminary. (e) Base period 1947-49.

Lead Average (Monterrey)

The net price realized by the American Smelting & Refining Co. on all of its sales of Mexican pig lead, including metal sold for consumption in Mexico, during the week ended April 18, 1953, was 10.63c. (US) per pound, f.o.b. refinery, Monterrey, Mex.

United States Gold Price

The price paid by the United States Treasury for gold purchased by the mints continued at $35 per troy ounce of fine gold, less ¼ of 1 percent.

Actual payment by the United States Treasury for gold in imported and domestic ore or concentrate is at 99.75 percent of the price quoted by the Treasury, which at present is equal to $34.9125 per ounce.

London Standard Tin

Standard tin on the London Metal Exchange, first session, per long ton:

	Standard Tin Spot	Standard Tin 3-Mo.
April 23	£695	£682½
April 24	£700	£695
April 27	£720	£712½
April 28	£735	£727½
April 29	£730	£722½

Rolled Metals, Etc.

BRASS – Cents per lb. (base prices)

	Sheet	Wire	Rods
Yellow Brass	42.87	43.16	a36.68
Best quality brass	44.43	44.72	44.12
Red brass 80%	45.99	46.28	45.68
Red brass 85%	47.11	47.40	46.80
Com'l bronze	48.76	49.05	48.45
Gilding metal	49.89	....	49.58

(a) Free cutting

CADMIUM – per lb. Special shapes, to platers, $2.15.

COPPER – Per lb. Sheets, over 20 in. wide, 50.48c., rolls 20 in. and under, 48.51c.; Wire, bare, carload lots, f.o.b. mills 37.58c.

LEAD SHEETS – Per lb., full rolled, 140 sq. ft. 17c.

MONEL METAL – Per lb. (base prices) Standard cold-rolled sheet, 67½c.; cold-rolled strip, 70½c. Rods, hot-rolled 65½c.

NICKEL – Per lb. (base prices) sheets, cold-rolled, 86½c.; rods, hot-rolled, 82½c.

NICKEL SILVER – Per lb., sheets, 10 percent, 56.56c.; 18 percent, 59.84c.; wire and rods, 10 percent, 59.83c.

PHOSPHOR BRONZE – Per lb., sheets, 5 percent tin, 70.50c.; wire and rods, 5 percent 70.75c.; 10 percent 78.55c.

ZINC – Per lb., carload lots, f.o.b. mill (base price): Sheet 23c.; ribbon 19½@20½c.; plates 20¾@21¾c., depending on size.

ZINC DIE-CASTING ALLOY – Ingot, per lb., carload lots, delivered, 15½c.

WANTED

Copper and Copper Alloy Scraps
(Berry, Birch, Candy, Ebony, Honey)
Nickel and Nickel Alloy Scraps
(Aroma, Array, Burly, Junto)
Ferro-Nickel Chrome Iron Scraps
(Obole)
Cobalt Alloys
Offers duly by exlicence grantees
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Iron, Steel, and Coke

IRON – Per gross ton, Valley furnaces: **Bessemer, $55.50; basic, $54.50, and No. 2 foundry, $55.00.**

STEEL – **Per net ton, f.o.b. mill, Pittsburgh, billets and slabs, $59. Bars per 100 lb., $3.95; plates and structural shapes, $3.85.**

COKE – **Per ton, Connellsville furnace, $14.50@$15; foundry, $16.50@$17.50.**

STEEL SCRAP – **Per gross ton, delivered Pittsburgh No. 1 heavy $44.00;** No. 2 heavy $42.00; Cleveland, No. 1 heavy $43.50; No. 2 heavy $40.50.

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New Copper Futures Contract

The board of governors of the Commodity Exchange, New York, has under consideration proposed by-laws for a new copper futures contract. Under the proposed new contract, electrolytic copper will be the basis for trading, with option to the seller to deliver certain other grades.

A movement is on foot to resume trading in copper futures on June 1, 1953. Trading was suspended in July, 1951, because of government controls. These controls have been lifted.

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Secondary Lead in January

Receipts of secondary lead by remelters, refiners and other consumers of purchased scrap totaled 48,497 tons in January, up 5.5% from December, the Bureau of Mines reports. Battery lead accounted for 32,459 tons of total receipts.

Apparent consumption of lead-base scrap in January was estimated at 51,698 tons, up 29.5% from December. Consumption of battery plates totaled 33,021 tons.

Stocks of lead-base scrap in the hands of consumers as January ended totaled 52,157 tons, which compares with 55,358 tons a month previous. Stocks of battery scrap on Jan. 31 amounted to 20,120 tons.

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Secondary Aluminum

Delivered prices of secondary aluminum ingot, per pound, in lots of 10,000 lb. or more:

Piston alloy, 22½c.; No. 12 alloy, 22c.; No. 13 alloy, max. .30 copper, 24½c.

Deoxidizing grade: No. 1, 23c.; No. 2, 22½c.; No. 3, 22c.; No. 4, 20½c.

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Copper Sulphate in March

Production of copper sulphate in March totaled 7,228 tons (gross weight), against 6,368 tons in February and an average of 7,878 tons a month in 1952, the Bureau of Mines reports.

Stocks of copper sulphate in the hands of producers at the end of March totaled 6,308 tons, which compares with 7,636 tons a month previous and 6,884 tons at the beginning of the year.

Byproduct Sulphuric Acid

Production of byproduct sulphuric acid at copper and zinc plants in the United States in 1952 increased 5% over 1951, and was the largest since 1944, the Bureau of Mines reports. Production during the last two years, basis 100%, in short tons:

	1951	1952
Copper plants (a)	189,125	202,364
Zinc plants	635,948	664,714
Totals	825,073	867,078

(a) Includes acid produced at a lead smelter. Excludes acid made from pyrites concentrates in Montana and Tennessee.

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Tri-State Concentrates

Joplin, Mo., April 28, 1953

Blende	*Per Ton*
Prime coarse (jig and table 60% zinc)	$65.00
Flotation, 60% zinc	$65.00
Galena	
Coarse and flotation, 80% lead	$144.90

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Brass and Bronze Ingot

85-5-5-5 (No. 115) 27½c.; 80-10-10 (No. 305) 32c.; 88-10-2 (No. 215) 37¾c. Yellow, 22¾c. and upward.

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Smelters' Copper Scrap Prices

Custom smelters' buying prices for scrap, carload lots, refinery:

No. 1 copper and wire, 24¾c.; No. 2 heavy copper and wire, 23c.; Light copper, 21c.; refinery brass, 21¼c.

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Dealers' Scrap Prices

Dealers' buying prices, f.o.b. New York or equivalent freight points, for wholesale quantities, in cents per lb.

No. 1 copper wire	21½@22
Heavy copper & wire, mixed	19@19½
Light copper	17½@18
No. 1 composition	17½@18
Composition turnings	17@17½
Cocks and faucets	15½@16
Light brass	11½@12
Yellow brass turnings, mix.	12@12½
Heavy yellow brass, mixed	12@12½
Auto radiators, unsweated	14@14½
Brass pipe, cut	16½@17
Rod brass turnings, No. 1	15½@16
Rod ends, brass	16½@17
New soft brass clips	17@17½
Cast aluminum, mixed	9@10
Aluminum crankcases	9@10
Aluminum clips, new soft	12@12½
Sheet aluminum, old clean	9@9½
Aluminum turnings, clean	7½@8
Zinc die cast, mixed	4@4¼
Zinc die cast, new	5@5½
Old zinc	4½@4¾
New zinc clips	6½@7
Soft or hard lead	9¼@9½
Battery plates	4¾@5
Babbitt mixed	12@12½
Linotype or stereotype	12@12½
Electrotype	10@10½
Solder joints close cut	16@16½
Block tin pipe	82@85
No. 1 pewter	60@63
Autobearing babbitt	45@48
Monel clips, new	30@32
Monel sheet, clean	30@32
Nickel, rod ends	90@95
Nickel, clippings	90@95

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